

REMARKS

In accordance with the foregoing, claim 1 has been amended to correct a typographical error without narrowing the claims within the meaning of *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 56 USPQ2d 1865 (Fed. Cir. 2000). No new matter is being presented, and approval and entry are respectfully requested.

Claims 1-18 are pending and under consideration. Reconsideration is requested.

Entry Of Amendment Under 37 CFR §1.116

Claim 1 is amended herein to replace the phrase "obtaining an analyzing circuit judgement by the computer result" with the phrase --obtaining an analyzing circuit judgement result by the computer."

Applicants request entry of this Rule 116 Response and Request for Reconsideration because the amendment of claim 1 should not entail any further search by the Examiner since no new features are being added or no new issues are being raised.

In fact, Applicants respectfully point out to the Examiner that in the current Office Action, the Examiner bases his rejection on the phrase "obtaining an analyzing circuit judgment result" (See, Office Action page 3, line 4). That is, any search by the Examiner was already conducted in view of language claim 1 as recited after the entry of the current amendment.

Further, the amendment places the application at least into a better form for appeal. amendments in view thereof. The MPEP sets forth in §714.12 that "[a]ny amendment that would place the case . . . in better form for appeal may be entered." (Underlining added for emphasis) The Manual of Patent Examining Procedures further articulates that the reason for any non-entry should be explained expressly in an Advisory Action.

Item 2: Rejection of claims 1-18 under 35 U.S.C. §103(a)

In item 2 of the Office Action, the Examiner rejects claims 1-18 under 35 U.S.C. §103(a) as being unpatentable over art Chang (U.S.P. 5,546,321) in view of combinations of "Performance Driven Global Routing And Wiring Rule Generation For High Speed PCBs and MCMs" by Mehrotra, Frazon, and Steer; and Chain (U.S.P. 5,682,336). The rejections are traversed.

I. Recited Features Not Taught By Cited Art

Applicants submit that features recited by each of the independent claims are not taught by the cited art, alone or in combination. Independent claim 1 recites a noise countermeasure determination method including "obtaining an analyzing circuit judgement result by the computer

by judging acceptability of the analyzing circuit based on a comparison of features of the analyzing circuit and a plurality of transmission circuit topologies into which the analyzing circuit is categorizable depending on manners in which wirings are connected, wherein a transmission waveform of the analyzing circuit differs depending on each of the transmission circuit topologies; and outputting an improvement proposal from the computer to the user for making the analyzing circuit closer to one of basic types of the transmission circuit topologies depending on the analyzing circuit judgement result." Independent claims 6, 11, 16 and 17 have similar recitations.

Applicants submit that Chang also does not teach "judging acceptability of the analyzing circuit based on a comparison of features of the analyzing circuit and a plurality of transmission circuit topologies (emphasis added)."

Further, Applicants submit that Chang does not teach "outputting an improvement proposal from the computer to the user for making the analyzing circuit closer to one of basic types of the transmission circuit topologies depending on the analyzing circuit judgement result (emphasis added)"

By contrast, Chang merely teaches a design method in which a knowledge base means (or an expert system) outputs a solution based on parameter or performance conditions which are input by a user and are related to a multi-layer printed circuit board.

Further, even an *arguendo* combination of Chang and Mehrota does not teach all recited features of the present invention. Applicants respectfully submit that since Chang does not teach or suggest "transmission circuit topologies" even an *arguendo* modification of Chang with Mehrotra does not teach how a net topology should be used for "outputting an improvement proposal," as recited by independent claims of the present invention. Therefore, a "judging acceptability of the analyzing circuit based on a comparison of features of the analyzing circuit and a plurality of transmission circuit topologies," is not taught by such an *arguendo* combination of Chang and Mehrotra.

In addition, Chang does not teach a computer "outputting an improvement proposal from the computer to the user for making the analyzing circuit closer to one of basic types of the transmission circuit topologies depending on the analyzing circuit judgement result." That is, according to the present invention, it is not the design engineer (or user) that makes the evaluation.

By contrast, Chang merely discusses that a person, i.e., design engineer can further

evaluate the output and observe a change in the output depending on the parameter (col. 8 lines 60-67).

Moreover, Mehrotra does not teach outputting such an improvement proposal for making the analyzing circuit closer to one of the basic types of the transmission circuit topologies. By contrast, Mehrotra merely relates to a method of transforming timing and noise constraints into physical constraints (or wiring rules). The wiring rule is determined by global routing using a net topology model that is used for evaluating the performance

The Examiner relies on Chian to support the rejection of dependent claims 2-4, 7-9 and 12-14. Applicants submit that dependent claims are patentable since patentability resides in parent independent claims 1, 6, and 11. Chain does not teach any outputting by a computer of an improvement proposal.

Since features recited by claims 1-18 are not taught by the cited art, alone or in combination, the rejections should be withdrawn and claims 1-18 allowed.

II. *Prima facie* Obviousness Has Not Been Established

On page 9 of the Office Action, the Examiner asserts:

"outputting an improvement proposal making the analyzing circuit closer to one of the basic types of transmission topologies depending on the analyzing circuit judgment result" is obvious because Chang teaches a GUI . . . and teaches that there are changes to the circuit based on a judgment result . . . "In the forward mode the design engineer can evaluate alternatives using "what if" analysis with any design parameter, and observe the ripple effect of the change in one or more design parameters on all other parameters.")

(Emphasis added, Action at page 9, lines 2-9).

The Examiner then asserts:

The parameters could be transmission topologies and the observed ripple effect could be the changed waveforms.

(Emphasis added, Action at page 9, lines 10-11).

Applicants respectfully submit that such assertions do not support establishing *prima facie* obviousness as not in keeping with parameters as set forth in MPEP §2144.04 which provide:

The mere fact that a worker in the art could rearrange the parts of the reference device . . . is not by itself sufficient to support a finding of obviousness. The prior art must provide a motivation . . . without the benefit of appellant's specification, to make the necessary changes in the reference device.

(Emphasis added.)

That is, it appears by using the Examiner's logic the cited references would teach

features of a myriad of applications in innumerable subject areas since the Examiner incorrectly asserts that the cited parameter "could be" any attribute and the observed "ripple effect" further "could be" any changed property. Applicants submit that such speculation on behalf of the Examiner does not establish *prima facie* obviousness.

In rejecting claims 2, 7, and 12, the Examiner also asserts:

Chain discloses, "Calculating transmission characteristic values of the analyzing circuit based on calculation formulas depending on the judgment result of said obtaining an analyzing circuit. " (by teaching) . . . "Some circuit designers calculate circuit performance to selected noise sources, based upon their experience and knowledge of previous designs"), . . . the process of acquiring the past experience of experts is expressly disclosed in Figure 1 of Chang, note the black oval with the label "EXPERT'S BRAIN". It would have been obvious . . . , to have used the waveform analysis methods of Chain in combination with the Judgmental knowledge methods of Chang and the circuit topology methods of Mehrotra in combination because, Chain discloses the use of an experts knowledge of a previous design . . . and Chang discloses using that type of expert knowledge in an expert system.

(Action at page 6, lines 1-13)

Applicants submit that such a proposed combination of the Examiner is unworkable and does not establish *prima facie* obviousness. Applicants respectfully submit that one of ordinary skill in the art would not look to construct the recited noise countermeasure determination method by a computer of the present invention by interrupting such determinations so as to acquire "the past experience of experts" or in combination with the "EXPERT'S BRAIN", as the Examiner contends.

Since *prima facie* obviousness has not been established, the rejections should be withdrawn and claims 1-18 allowed.

III. Examiner's Statements Unsupported

Applicants respectfully submit that the following statements submitted by the Examiner are essentially unsupported takings of official notice, regardless if the Examiner used the term "official notice" or not. The Applicant respectfully traverses the following Examiner's statements made in support of the rejection:

1) "That observed ripple effect could be the changed waveforms. (Action at page 4, lines 13-15)

2) A "judgment from the computer could be reasonably interpreted to mean the output of potential outcomes which are provided for the user to pick from these recommendations".
(Action at page 9, lines 12-15)

3) In an "AI or expert systems, (which) will provide outputs to users based upon a criteria, and that output is the functional equivalent of a judgment (Action at page 9, lines 12-15)

The Applicants specifically point out the following errors in the Examiner's action. As set forth in M.P.E.P. §2144.03(a):

the notice of facts beyond the record which may be taken by the Examiner must be capable of such instant and unquestionable demonstration as to defy dispute.

Applicants submit there is no evidence supporting the Examiner's assertion. See M.P.E.P. § 2144.03(B) ("there must be some form of evidence in the record to support an assertion of common knowledge").

Further, if the Examiner also bases the rejection, at least in part, on personal knowledge. the Examiner is required under 37 C.F.R. § 1.104(d)(2) to support such an assertion with an affidavit when called for by the Applicant.

Applicants demand the Examiner produce evidence supporting the statements or if such statements are based on personal knowledge supporting the statement with an affidavit, or withdraw the rejections.

Summary

Since features recited by claims 1-18 are not taught by the cited art, alone or in combination, *prima facie* obviousness has not been established, and various of the Examiner's statements are not supported, the rejections should be withdrawn and claims 1-18 allowed.

CONCLUSION

In accordance with the foregoing, it is respectfully submitted that all outstanding objections and rejections have been overcome and/or rendered moot. And further, that all pending claims patentably distinguish over the prior art. Thus, there being no further outstanding objections or rejections, the application is submitted as being in condition for allowance which action is earnestly solicited. At a minimum, this Amendment should be entered at least for purposes of Appeal narrows the issues for consideration by the Board.

If the Examiner has any remaining issues to be addressed, it is believed that prosecution can be expedited and possibly concluded by the Examiner contacting the undersigned attorney for a telephone interview to discuss any such remaining issues.

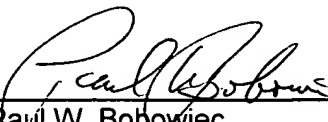
Serial No. 09/881,732

If there are any underpayments or overpayments of fees associated with the filing of this Amendment, please charge and/or credit the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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